

Claims

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1. Transceiver unit comprising a transmitter (1) for generating a sampled signal, an acquisition antenna (5) for emitting the sampled signal into an acquisition volume (8) and for picking up an effective echo signal reflected by the acquisition volume (8), as well as a receiver (2) for evaluating an echo signal supplied by the acquisition antenna (5), said signal being composed of the effective echo signal and an unwanted echo signal generated by the acquisition antenna (5), characterized in that an antenna simulation (6) is connected via one or more couplers (3, 4, 15, 19) to the transmitter (1) and the receiver (2), which, upon receiving the sample signal, supplies an unwanted echo signal in proportion to the correction signal, and in that the coupler or couplers (3, 4, 15, 19) so heterodyne the correction signal and the echo signal that the correction signal and the unwanted echo signal delete each other.
2. Transceiver unit, as defined in Claim 1, wherein the antenna simulation (6) is a second antenna and is so placed that said antenna emits into an absorber (11).
3. Transceiver device, as defined in Claim 2, wherein the antenna simulation (6) is similar in design to the acquisition antenna (5).
4. Transceiver unit, as defined in Claim 1, wherein the antenna simulation (6) is a Z network.
5. Transceiver unit, as defined in one of the aforesaid claims, wherein said unit comprises a power splitter (4) for distributing the sampled signals with respective equal power to the acquisition antenna (5) and the antenna simulation (6).
6. Transceiver unit, as defined in Claim 2 or 4, wherein said unit comprises a power splitter (4) for distributing the sampled signal to the acquisition antenna (5) and the antenna simulation (6), which feeds a smaller part of the power of the sampled signal to the antenna

simulation (6) then to the acquisition antenna (5), and in which the simulation (6) has a higher reflectivity than the acquisition antenna (5).

7. Transceiver unit, as defined in one of the aforesaid claims, wherein said unit supplies the correction signal as a  $180^\circ$  phase quadrature to the unwanted echo signal.

8. Transceiver unit, as defined in one of the aforesaid claims, wherein the echo signal is a radio signal and wherein between the acquisition antenna (5) and the coupler (15) or between the simulation (6) and the coupler (15) respectively a mixer (13a, 13b) is placed for converting the echo signal or correction signal on an intermediate frequency.

9. Transceiver unit, as defined in one of the aforesaid claims, wherein the coupler (3) comprises a waveguide ring with four connections (16a, 16b, 16c, 16d), which respectively are connected through waveguide sections (17a, 17b, 18a, 18d) the lengths of which respectively correspond to one-quarter of the wavelength of the sampled signal, characterized in that the acquisition antenna (5) and the simulation (6) are connected to the adjacent connections (16b, 16c), and in that the transmitter (1) and receiver (2) jointly are connected to a connection (16b, 16c) of the acquisition antenna (5) or the simulation (6) of the adjacent connection (16a).